St Louis Nov 15
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SMITHSONIAN INSTITUTION,

WASHINGTON, D. C., November 12, 1880.

Dr. Englemann.

My dear Sir.— I take the liberty of sending you by express, prepaid, some drawings of the oaks found in the vicinity of Mount Carmel, Wabash County, Illinois, as well as a few specimens of the leaves and fruit of the same; also, some sketches which may possibly interest you. My excuse for send=ing these to you is the hope that you may be able to glean therefrom even a little material which will aid you in fixing with more certainty the charac=ters of some of the more doubtful forms. The draw=ings in question were made, and the specimens gathered, at least a year before I first saw your excellent synopsis of this perplexing but most inter=esting group of trees, my object in making the col=lection being to amass material sufficient to sub=stantiate my views as to the complete distinctness of the Mississippi Valley forms referred ~~to~~ in the stand=ard text-books to Q. prinus (i.e. michauxi and muhlenbergii) from the Eastern Rock Chestnut Oak, with which I

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had become familiar since the beginning of my residence in Washington, in 1870, it being one of the most abund= ant of the oaks in this vicinity. When I first saw it, I was immediately impressed with its totally distinct aspect, as compared with the western species referred to above, it being here, so far as the color of the bark is concerned, emphatically a "black oak", though the foliage and fruit are of course very different.

To avoid extending these explanatory remarks beyond necessary limits, however, I will merely add that I have become very deeply interested in the study of our trees, partly through their connection with my chosen branch of Natural History (Ornithol= =ogy), but chiefly ~~with~~ through my love of Nature in gener= =al, and the woods in particular; and that, if any of the material which I send you will be of the slightest use to you, you are entirely welcome to it. The drawings on bristol-board, however, I would like to have returned to me, at your conven= =ience; but you are at liberty to copy any or all of them should you wish to do so, or to make any other use of them which you may see fit.

Thanks to your investigations, I think that I now understand the species of the "white-oak" group

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pretty well; but some of the black oaks still puzzle me very much, and if it would not put you to too much trouble I would be greatly pleased to have you enlighten me. We have, as a very abundant tree in the Wabash country, but growing chiefly if not entirely on the bottom-lands, a very large black oak which is known locally as the "Turkey Oak" and "Spanish Oak", and, though I believe not commonly, "Red Oak". Its wood is much used in the manufacture of barrel staves and clap-boards, so that most of the finer trees have been cut. The species may be immediately, and I believe imaterially, distinguished from the Q. palustris, which often grows in the same localities, by the darker and more deeply furrowed bark, but particularly by the very prominent buttresses or spurs at the base, (probably Q. rubra) in which, latter respect it more resembles the White Elm, when growing in very wet locations, than any other of our trees. The tree occasionally measures as much as 12 feet in diameter at the ground and half as much above the buttresses, a common size being a 4-5 feet through (above the spurs) and 50-70 feet to the first limb, the trunk very straight and symmetrical. The top is both lofty and wide-spread, some trees measuring 85-100 feet ambitus and 140-150

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feet high*. Unfortunately, I have no leaves which I am

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*The largest prostrate tree measured was 23 ft. circumference above the spurs, and 3 ft. diameter 76 feet from the base; the total length 160 ft., the larger branches at 120 ft. being 1 foot in diameter. The base slightly hollowed. Another was 6 ft. diam. across top of stump and 3 ft. at 72 feet from base. 120 annual rings were counted to the split-ted centre, where there could not have been much over 20 more, so that, notwithstanding its size, the tree was probably little if any more than 100 years of age. The large photo. (no. 25) shows a very typical form of trunk, the tree being near the size of the above.

---

certain belong to this species; but I send two photographs and several sketches of trunks which will no doubt enable you to identify it with certainty. I have the species down in my notes as "Q. rubra?", but have sometimes thought that it may be a form of Q. tinctoria or coccin-ea. I would very much like to have your opinion as to what it really is.

Among the photographs which you I send (and which I would like to have returned; as I have no duplicates of them) are two showing the size to which Q. macrocarpa not infrequently attains; also, two showing very

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five examples of Q. muhlenbergii (which is perhaps occas=
-ionally our very tallest species), besides various sketches
showing the characteristic form of trunk of Ulmus americana, Fraxinus
americana, and Taxodium distichum, when growing (as the
latter always does) in very wet bottoms. Also, several sketches
showing complete coalescence of the trunks of two or
more species of trees, which is quite a frequent
occurrence in the ~~bottom~~ cypress swamps. In the exam=
=ples from which the sketches were made, the coalescena
is so complete, that the bark is entirely uniform in
appearance below ~~where~~ the point of divergance of the
trunks.

Before being done with the subject of oaks, however,
I wish to allude to a single tree ~~one~~ which has puzzled me very
much. The tree in question is imperfectly shown in the
left-hand background of photograph no. 27, which will give you an
idea of its form. Had I known at the time that
it was any way different from true Q. falcata (the typical
form of which I was then autophically acquainted with), I
would have had a special view of it taken. The peculiarity
of this tree was that its bark was light=colored, my recol=
=lection being that it much resembled in the character of the
bark (the color at least) Q. muhlenbergii, which is our
lightest colored "white oak". I remember distinctly the sur=
=prise which I experienced at the time, for I had been

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regard Q. falcata in my mind as a "black-oak" (which of course it really is in its typical state). I gathered from the ground immediately beneath this tree a number of leaves which had newly fallen, and they were pronounced by Dr. Vasey (who I believe has them still) to be Q. falcata, though somewhat different from the usual style of that ~~tree~~ species. There can be no question that these leaves belonged to this ~~the~~ very light colored tree, for I could distinctly make out the shape of those still on the branches, I speak only as to the light aspect of the trunk, the impression being a great similarity to Q. muhlenbergi. The bark may have been furrowed, and otherwise agreeing with the black oaks: of this I cannot speak with certainty. Should I ever have an opportunity I will most certainly search for this tree, and, if it has not been destroyed, secure good specimens of the bark and leaves, and, if possible, the fruit. I forgot to mention above, that the tree is a very tall one, measuring 14 ft. in circumference, and at least 130 ft. high, the trunk fully 70 ft clear.

In closing this rather extended letter, I would say that, since I do not possess any of your papers on the oaks, or other trees, ~~&~~ while I frequently wish to refer to them, I would be exceeding glad to have copies of any which you have to spare; or, if you have none, and will kindly inform me where

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they may be obtained, I will be just as much obliged.

Trusting that I have not intruded too much on Your valuable time, I am, with great respect,

Yours very truly

Robert Ridgway.

Dr. George Englemann
Saint Louis,
Mo.

P.S. — You may perhaps have heard of me through Dr. Schneck, of Mount Carmel. My position here is that of Curator of Ornithology in the United States National Museum. — R.R.

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